



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

# JOURNAL

OF

# FARM ECONOMICS

---

VOL. III.

JULY, 1921.

No. 3

---

## **FARM MANAGEMENT AS INSURANCE FOR THE NORTHERN GREAT PLAINS AREA.**

CAP E. MILLER.

AGRICULTURAL COLLEGE, FARGO, NORTH DAKOTA.

The farmer has no absolute guarantee that he will be successful in his business for any particular year. There are many forces over which he has little or no control. There is no rule of thumb method by which he may cut out all losses and secure fabulous or even fair profits. But there are a number of guiding principles which will serve him if he is willing to think and manage while he works. These farm management principles or factors are quite similar for all the different regions of our country. But the order of their importance varies widely in different regions and with different types of farming. Out of the usual list of farm management factors the writer has selected for consideration and emphasis the following: land settlement and the selection of a farm; size of farm; diversity and rotation of crops; business methods; and adaptation of crops. He believes that these five factors are the most important and fundamental for the farmers of this particular region under present conditions, and that if farmers will give them proper attention they will succeed in their business in a region not well known or understood and in a region of apparent unusual risk.

### **I. LAND SETTLEMENT AND THE SELECTION OF A FARM.**

Land settlement of some kind has been going on ever since Columbus discovered our country. But Land Settlement today has a new and different meaning. It suggests more guidance and help than ever

before. It implies also more capital or credit with which to start the settler than previously.

It does not necessarily mean the assimilation of a foreign population which has just arrived in this country. It may include some such folk. But it also includes young and middle-aged people from the corn belt and other densely settled agricultural regions who are being pushed out because of very high prices of land and rent where "the average farm is too small to permit an economic use of either capital or labor." "Many capable and intelligent young men are being lost to agriculture because they have neither the money nor the credit to enable them to acquire a farm in the old-established regions."

There is a shifting of owners as well as renters of farms continually. It has been said that all the farms in our country change ownership every thirty years. If this is approximately true, herein lies a wonderful opportunity for Land Settlement. Let the State, private parties and agricultural colleges step in and guide and help these settlers for the next thirty years. We should direct them from crowded farm regions to good farm regions where the farms are too large to be most efficient. Land Settlement may include some city people who are rural minded, but it refers especially to farm operators, farmers' sons, farm hands, renters or owners who need a change of location in order to secure farm profits.

While the influence of the farm practice used in the northern Great Plains extends out over our entire State of North Dakota, yet most of our scientific investigations—State as well as Federal—divide the State roughly in two districts; the humid lying east of the 100th meridian and semi-arid lying west of that line. It is interesting to note that records from the North Dakota demonstration farms and the opinions of some of our best farmers counteract the common idea that yields of small grains, especially wheat, are much greater in this humid eastern part than in the semi-arid western part. Failures are more common in the Plains section, but when climatic conditions are favorable a larger crop is produced. This should be especially significant to settlers who have sufficient capital and credit to tide them over an occasional year. Bad years come to all farm sections and it takes nerve to be a farmer in any part of our country. The danger from drought where farm management principles are followed should not be much greater than the danger from excessive moisture as found in several States. Diversity and rotation of crops and adaptation of crops to locality may never take the place of lack of rainfall and moisture in this dry-farming region, yet the introduction of safe

farm practices will help to tide over the bad years and some enterprise—either plant or animal—will bring in a return each season.

Not only must the location selected offer a real opportunity, but the land must fit the man and his family. The fit here is just as essential as in the case of a suit of clothes. Absolute honesty and integrity must be used throughout all these contracts and transactions. History tells us that a great improvement is possible and necessary here. These settlers must have some of the sterling characteristics of former pioneers. They must love the soil, be ambitious as tillers of it. The wife as well as the husband must be interested in this kind of work, because the house is the headquarters and office for the farm business. The two are knit together more closely than is the case in any other occupation.

Settlers need assistance against worthless lands as well as against land sharks. The land business has too often been conducted on a low ethical plane. And since the public interest is at stake to a large degree, it is only natural that a number of our States should provide for Immigration Departments with laws, regulations and officers. This does not need to interfere with private land companies, who wish to see settlers succeed, and have trained farm managers and economists to guide them in their dealings, and who have at least some degree of public interest at heart. The *JOURNAL OF FARM ECONOMICS* (Vol. 2, No. 3, July, 1920) contained one such general yet private plan for a land company that sells its land under what is known as a Crop Stock and Insurance Contract. An insurance feature provides that the buyer must insure his life to the company as beneficiary during the period of the contract for an amount equal to his indebtedness, which means that in the event of death the debts on the farm will be satisfied in full and the family will inherit the farm clear of all incumbrance.

Agricultural colleges furnish one of the most promising avenues in solving the Land Settlement problem. A group of agriculturists in North Dakota met recently and discussed "What to Raise" in North Dakota, and the two following plans were later published:

#### PLAN No. I—EASTERN NORTH DAKOTA.

What to raise will depend on many factors as location, size of farm, kind of soil, lay of land, amount of waste land and the experience and wisdom of the farmer. For the six Red River Valley counties a good cropping system for a 320-acre farm would be grain one half, cultivated crop one fourth and pasture and hay one fourth. The crops could be as follows:

30 acres—farmstead, roads and untillable land to be pastured.

- 70 acres wheat.
- 70 acres oats, barley and flax.
- 70 acres corn or potatoes.
- 40 acres brome grass, timothy and clover (pasture, hay or seed).
- 20 acres alfalfa.
- 20 acres sweet clover (pasture, hay or seed).

A Red River Valley farm cropped in this manner should on the average produce sufficient feed for 30 cattle, the pigs from 6 to 10 brood sows, and the 8 or 10 horses needed to run it. If a quarter-section farm is to be operated in the Red River Valley the amounts of the crops and live stock suggested for the half-section farm can be about cut in two.

#### PLAN NO. 2—WESTERN NORTH DAKOTA.

For the western half of the state a farm could well be cropped one half to grain, one fourth to cultivated crops and one fourth to hay and pasture crops. For a one half section farm with 70 acres of waste land the following is suggestive as to what the crops could be:

- 80 acres—farmstead, roads and untillable land to be used for permanent pasture.
- 60 acres wheat.
- 20 acres oats.
- 30 acres flax and barley.
- 60 acres corn, sunflowers and potatoes.
- 30 acres brome grass (pasture, hay or seed).
- 10 acres sweet clover (pasture, hay or seed).
- 30 acres alfalfa (hay or seed).

A half-section cropped in this manner should produce enough feed for 18 cows or their equivalent, for the pigs raised from 5 to 8 brood sows and for the 6 horses that will be needed for motive power. There should be at least one silo on the farm and better two, so as to have ensilage for a part of the summer as well as for the winter.

In comparing these two plans one notices an unexpected similarity. If the two plans are sound in organization and adaptation to locality, an ambitious settler should not be afraid to tackle the job of farming in western North Dakota. While these plans may not stand the scientific test of careful farm surveys, yet it is a step forward. The farm acreage is large, but not so large as the farms are today. A balance or ratio is suggested for crops and live stock. The plans are incomplete and should go on—after sufficient surveys of the State have been made—to show more emphatically the best size of farm, the proper ratio of land, buildings, equipment, supplies, labor and cash.

These surveys constitute the first step toward intelligent permanent farm settlement. Later there must be absolutely honest publicity as to existing conditions and future possibilities of this great agricultural region. The publicity should disclose the ownership of all land fit for settlement as farm land. Several authorities have suggested

some system of issuing real estate licenses under State regulations.

The settler must have land of quality, and yet cheap land, if he is going to be able to pay for it. The northern Great Plains is still able to furnish cheap land which many people believe offers the same inducements for home seekers that Iowa and Illinois held out ten or twelve years ago.

Probably no one believes in the adoption of a national policy for the opening of lands and the arbitrary increase of our farming population to an extent that would cause over-production and extremely low prices for farm products. But idle and half-idle land of quality in the northern Great Plains country could be settled as indicated above and the settlers themselves and society as a whole would profit thereby and our present unrest would be at least partially relieved.

## II. SIZE OF FARM—THE SECOND FOUNDATION FOR INSURANCE IN FARMING.

Acres alone do not measure the volume of farm business, but in the northwest grain and dry farming sections of our country it is perhaps the best single measure of the farm size for such an extensive type. There is perhaps no other section in our country where acres alone have so much influence on labor incomes. Profits per farmer are more important than profits per acre, and America has always been strong on profits per man even if she is weak on profits per acre. But if farms are exceedingly large, you get neither satisfactory profits per man nor satisfactory profits per acre. Insurance offered by farm management in this connection comes from the fact that the proper size of farm will bring both satisfactory profit per man and per acre. When one sees dandelion growing in his fields, mustard, quack grass, Canada thistle, or, worst of all, sow thistle—to such an extent that he can not control it—then it is time for him to look after this matter of size of farm. That's the very condition in which many northwest grain farmers find themselves today.

For most regions where spring wheat is the leading cash crop it hardly seems possible to secure the most economical production on a farm of less than 320 acres, and there is some reason to believe that 480 acres is better than a smaller size. Our farms now vary from a quarter section to four sections and the average in the State is from three quarters to one section in extent.

We are continually reminded that large ranches, stock-raising enterprises and grain farms tend to create unfortunate social conditions and do not contribute to a permanent agriculture. Migratory labor

and isolation of farm families do not contribute to the best interest of society or to the best labor incomes. One can hardly realize the extreme to which we have gone until he eats in one of our "chuck" wagons and works in the field with migratory laborers who sleep in barns.

### III. DIVERSITY AND ROTATION OF CROPS AS INSURANCE.

Farming always involves risk. To minimize this risk arrange for from one to four major sources of income. Four chances are better than one. Diversity usually includes rotation of crops. Farmers in our region have not yet considered the subject of true rotation of crops seriously. It has not been necessary. Our new lands have found two types of farming profitable; a one crop grain farming type carrying little live stock other than the horses required to do the farm work and a second one crop live stock type of farming with a relatively small area in field crops where the stock is carried during the growing season on permanent (usually wild grass) pastures.

In my opinion we can look for one definite standard to be developed for our semi-arid region and another somewhat definite standard for our Red River Valley region. Rotations that are being tried out on our State Demonstration Farms vary from "a four-year rotation of corn, wheat, barley and sweet clover, to a nine-year rotation of corn, wheat, sweet clover, flax, oats, potatoes, and barley." Just as corn, cotton and hay are given the most favorable location in a rotation series for their respective agricultural provinces, so wheat must be given the favored place as the best cash crop producer in our region.

#### *The Fallow Situation.*

This district constitutes one of the few real fallow regions in the United States, and one might conclude, therefore, from a historical standpoint, that it is one of the most backward agricultural regions. This is not the case, but it is an interesting situation that deserves some study.

Fallowing of some kind is quite a common but expensive and temporary farm practice. Farmers cling to it in certain parts of North Dakota because they do not realize that something better can be substituted, because it helps them to retain a large acreage or farm, because of protection it offers against weeds, and because of protection it offers as a last resort for bad years.

## IV. BUSINESS METHODS, FARM AND COST ACCOUNTS AS INSURANCE.

The shrewd business man makes as few guesses as possible. He gets together the facts regarding the conditions, and then proceeds to analyze them carefully. He draws such conclusions as may be made safely. A farmer can take advantage of this same principle by keeping farm records of various kinds. A study of these records makes farming a safer business. Mistakes can be avoided. Time can be saved. The farmer can not only help himself, but he can help others by coöperating with his State College of Agriculture in securing data for cost of production studies. From these tabulations and studies he and his neighbors can tell what to expect in the way of yield, cost and profit. These studies will aid him in planning ahead for the lean, poor and dry years. Our farmers have made more progress in this line in the last four years than in any other phase of farm management. They know that the cost of growing all crops (like wheat) is usually greater on the eastern than on the western farms, but that crop risks are greater in western than in eastern North Dakota. One bulletin indicates that the risk is 15 percent to 25 percent greater in the western than in the eastern part of the State. This risk is reflected in the value of land and is partially compensated for in low land values. Cash rent has been estimated \$2.97 per acre for the eastern section and only \$1.34 per acre for the western section, but share rent is the usual form of rent in this section.

Business methods include some system of credit. Farmers must have money to run their business. They are learning that they can not borrow at a high rate and accept a low rate on their own investment. They can not make profits in that way. Our North Dakota farmers have taken advantage of the Rural Farm Loan Law. E. G. Quamme, of the Federal Land Bank of St. Paul, stated on January 12, 1920: "We have issued to the farmers of North Dakota up to January 1, 1920, the sum of \$17,878,900. These loans were made through the one hundred and seventy chartered farm loan associations in that State."

About 65 percent of the money borrowed has been used to refund loans and the balance for such purposes as erecting buildings, making improvements on the land, buying machinery, live stock and equipment, and for the purchase of land. In other words, about 65 percent of the money loaned in North Dakota has been used for the refunding of loans and 35 percent has been used for acquiring land and extending operations.



#### V. ADAPTATION OF CROPS TO LOCALITY AS ONE OF THE BIG SOURCES OF INSURANCE.

Time was when men took out only fire insurance on buildings or stock of goods and life insurance on their lives. But now there is a gradually increasing interest in many forms of insurance which have so gained in favor that he is deemed a poor business man, indeed, if he does not take advantage of them so as to play a safe game. The banker insures his bank against burglary, the fair management and Chautauqua associations against rain, the employer against strikes and accidents to employees. Hail insurance insures our farmers against loss if their crops are destroyed by hail, and tornado insurance protects farmers from another form of Nature's wrath. High-priced blooded live stock is insured. These all convince us that the insurance field has extended over a far greater area than its earlier projectors dreamed of. And because of the interesting and successful results that our agronomic and live-stock scientists are accomplishing I like to think of adaptation of crops and animals to localities as one of the very best forms of insurance. It is cheap insurance, but farmers take to it better and more quickly than even to the rotation of crops. They see the results sooner and more vividly.

Things have to be done properly and early in North Dakota. The north is the region for quick step and action. The short season demands it, although little time is lost because of unfavorable weather during that short season. This is one reason why many like to call our State the Sunshine State. Something like 144 days are available for field work. Our farmers have learned to risk spring frost rather than fall frost.

The Plains country has high fluctuations in yield, due to variations in rainfall, and while some old and also recent authorities claim that these can not be sufficiently overcome by scientific and cultural methods to change the situation materially, I know the temper of our agronomic and live-stock scientists too well to despair of their discovering something that has not been known before. Many good results are already apparent. Hailstorms scared away some of our early settlers, but now we have private or State protection from them if we want to invest in it. We have always had prairie grass, flax and wheat, but only recently we found the use and adaptation of not only crops, but of *varieties* of a crop to a locality. These legumes and cultivated crops look like high-class insurance because they bring crops or partial crops under adverse conditions much more than in the case of grain crops. Corn will produce a fair yield of stover

even in dry years. It will produce winter feed for live stock in dry-farming regions when there is so little summer rainfall that prairie grass is withered with heat and when opportunities for cutting hay are very limited.

While silage is usually fed to dairy cattle, yet it can be used as feed for other live stock, and it is another possibility from corn as an insurance against dry years. It has been kept at our North Dakota College for four years and records are on file of its having been kept in good condition for fourteen years. Pit silos burrowed beneath the surface preserve and furnish summer or winter feed against the dry year and cost little but labor.

Grimm alfalfa and brome grass offer new insurance against adverse conditions in North Dakota. They may not yield as much feed per acre as corn and some other crops, but they are labor savers in that they do not have to be planted every year. One of our college students tells me that he has a field now in alfalfa for the eleventh year. This shows that it does not adapt itself to short rotation plans. Brome grass is somewhat similar in this respect. These crops should remain as hay fields as long as they produce well. Brome grass may be pastured to good advantage for several years after it becomes so sod bound that it no longer produces a profitable yield of hay. However, by proper management these crops may be made a part of either a regular short or long rotation scheme. But somewhat long rotations seem to be favored in our territory. It is interesting to note that many farmers in North Dakota are growing these crops long before they practice a regular rotation.

Alfalfa, corn, sunflower, sweet clover and potatoes are protecting and serving us again when they furnish work for June and fill up a labor gap that has been a weak part of our whole northwest farm history. Dr. Spillman told me a number of years ago that this gap might be filled up with millet and buckwheat, but we have found other crops that promise to do it even better.